

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 April 2005 (28.04.2005)

PCT

(10) International Publication Number
WO 2005/037995 A3

(51) International Patent Classification⁷: A61K 45/00, 47/00

(21) International Application Number: PCT/US2004/032669

(22) International Filing Date: 5 October 2004 (05.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/508,945 6 October 2003 (06.10.2003) US

(71) Applicant (for all designated States except US): CEDARS-SINAI MEDICAL CENTER [US/US]; 8700 Beverly Boulevard, Los Angeles, CA 90048-1865 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YU, John, S. [US/US]; 269 Ashdale Place, Los Angeles, CA 90048 (US). AKASAKI, Yasuharu [JP/JP]; 10811 Ashton Avenue, #104, Los Angeles, CA 90024 (US).

(74) Agents: LEVY, Seth, D. et al.; Davis Wright Tremaine LLP, 865 Figueroa Street, Suite 2400, Los Angeles, CA 90017-2566 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
1 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/037995 A3

(54) Title: USE OF COX-2 INHIBITOR TO PREVENT T-CELL ANERGY INDUCED BY DENDRITIC CELL THERAPY

(57) **Abstract:** The present invention relates to a method and combination therapy useful in the treatment of cancer. More specifically, the invention relates to the use of COX-2 inhibitors in combination with a therapeutic dendritic cell vaccine for treating cancer. The COX-2 inhibitors of the present invention are believed to inhibit the enzymatic activity of prostaglandinE₂ (PGE₂); thereby preventing COX-2 overexpressing tumors from evading immune surveillance by antigen-specific cytotoxic T lymphocytes (CTLs). COX-2 inhibitors are believed to suppress PGE₂ that COX-2 overexpressing glioma produce, allowing tumor-infiltrating DCs to polarize Th cells toward Th-subset-1 (Th1).